# Problem G: The Ferry Boat Problem

I went to a ferry a short time ago to investigate the relative speeds of two boats, and by calculation evolved the following information:

The two ferry boats started from opposite sides of the river at the same instant. One boat, however, was faster than the other, so they met at a point just 720 yards from the shore. Each boat remained but ten minutes in the slip to change passengers and then started on its return trip, when, by careful calculation, I found that they now met at a point just 400 yards from the other shore.

From the data given, you are asked to determine the exact width of the river.
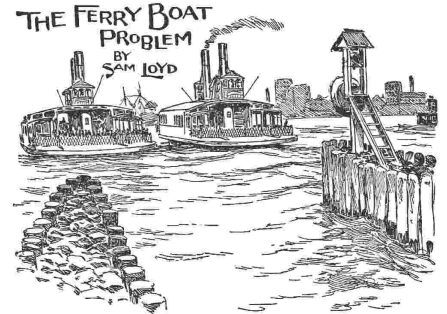
Two ferry boats crossing the river

Two boats start moving with constant speed from the two banks of a river at the same instant. Each boat reaches the opposite side, stays there for ten minutes and then returns to its starting point.

You don't know the speeds of the boats, but you know that they meet for the first time exactly **A** yards from one of the shores, and that the boats meet again in their return trip, exactly **B** yards from the other shore. How wide is the river?

Input

Input starts with a positive integer **T**, that denotes the number of test cases.

Each test case is composed of two integers **A** and **B**, given in a single line. You can assume that the distances given guarantee that there exists a valid answer. That is, the width of the river is a number of yards greater than A and B.

$T \leq 10000 \; ; \; 1 \leq A, B \leq 10^{15}$

Output

For each test case, print the case number followed by the width of the river in yards.

Sample Input	Output for Sample Input
2 720 400 300 300	Case 1: 1760 Case 2: 600